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In this second supplement, The Committee on the Educational Forecast of The University of Akron directs its attention to graduate education. The report covers the historical development of graduate education at the University; present graduate study programs; programing in graduate studies; faculty, facilities, and financing at the graduate level; and administration of graduate studies.

Recommendations deal mainly with proposals to investigate the many facets of operation involved in graduate programing in anticipation of higher enrollments. Also recommends that the University investigate the advisability and practicality of establishing joint graduate degree programs with area institutions of higher education.

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SUPPLEMENT NO 2

TO

THE FIRST REPORT

ON THE

EDUCATIONAL FORECAST

OF

THE UNIVERSITY OF AKRON

U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
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THE UNIVERSITY OF AKRON
Akron 4, Ohio

June 20, 1960

GRADUATE STUDY

Graduate study at The University of Akron has a long history. According to the records of the Registrar, the first earned Master's degree was awarded in 1880, ten years after the founding of Buchtel College. From that time until Buchtel College became The University of Akron in 1913, a total of nineteen earned Master's degrees was granted.

During the early years of the existence of the college, no further requirements were set for the Master's degree than "devotion to literary pursuits" and the passage of a three-year period from the time of graduation. The catalog of 1890 lists the additional requirement of "a satisfactory thesis or oration." The catalog of 1891 stipulates the further provisions of "special work in any two departments on which examinations will be required." In 1893-1894, the nature of the work necessary for a Master's degree was further defined as being "beyond that of the college curriculum," while the catalog of 1894-1895 states that "the thesis should give evidences of original work in the investigation of some new field." Additional requirements were included from time to time, chief among them the choice of major and minor subjects, the completion of at least thirty-two credit hours of actual work, twenty-four of which were to be entirely aside from undergraduate classes and finally, rigid provisions for examination and residence.

Throughout the years, appropriate graduate changes and innovations, in keeping with current and projected academic demands, have been initiated at The University of Akron. As early as 1924, Teachers College, the predecessor of the present College of Education, awarded Master's degrees in Education. Gradually, other departments in the Buchtel College of Liberal Arts, such as English, history, chemistry, physics, etc., added programs of study leading to graduate degrees. The most recent and significant University developments in graduate areas have been the formalization of the Ph.D. program in Polymer Chemistry in 1956, the Master of Science Degree (M.S.) in Engineering in the Spring of 1957 and the Master of Business Administration Degree (M.B.A.) in Business Administration in the Fall of 1958.

Although graduate work in chemistry has been offered for many years for the Master's degree, the primary impetus for a further extension of graduate chemistry came because of the expanded research program of The Institute of Rubber Research. In 1959, five select graduate students achieved this terminal degree and prepared the way for a continuation of this level of quality academic and research performance.

The development of a graduate program in engineering was inevitable. The geographical location of The University of Akron in a highly complex and industrialized population center made such a move imperative. Consequently, a part-time evening graduate program in engineering, with possible concentration in the civil, mechanical or electrical fields, was offered for the first time in 1957. Interest in this level of engineering education has to date proved to be high.

Although the College of Business Administration was not established until 1953, business demands necessitated the vertical extension of the programs in this area almost from the very beginning. Consequently, in 1958, advanced business administration courses leading to the Master's degree were introduced into the curriculum evenings. With this move, all four of the undergraduate colleges are now involved in providing graduate study opportunities.

From 1913 to 1920 the newly established University of Akron did not award any earned graduate degrees. Beginning in 1920, however, the number of Master's degrees conferred each year reflected a rising demand for study beyond the baccalaureate level. A table showing the total number of graduate Master's degrees granted for each ten-year period, and by colleges, appears below.

EARNED MASTER'S DEGREES GRANTED BY THE UNIVERSITY OF AKRON BY COLLEGES
1920 - 1959

	Liberal Arts	Engineering	Education	Business Admin.	Total
1920-1930	9	0	102	0	111
1931-1940	38	0	110	0	148
1941-1950	77	0	96	0	173
1951-1959	153	2	185	1	341
	277	2	493	1	773

Advanced graduate work is an important and rewarding responsibility for institutions of higher learning prepared to engage in it. Properly

administered and supported, it enhances the quality of the undergraduate programs. This is so because graduate courses require an upgrading of the faculty, library and general facilities which inevitably benefit the undergraduate curricula. Of course, sound academic judgment should be exercised in the selection of areas to which a university commits itself at the graduate level. In the considered opinion of the Forecast staff, The University of Akron has been guided by this point of view and the result has been a program of restricted graduate work but of high quality.

The importance of graduate studies within the total structure of the University received added administrative recognition in 1955 with the appointment of a Director of Graduate Studies by the Board of Directors upon recommendation of the President. Among his duties, as outlined in the University By Laws and Regulations, were the following:

To

"Encourage the several colleges to develop programs of graduate study, provided such programs are educationally sound and financially feasible.

"Be jointly responsible with the Deans of the degree-granting colleges for maintaining a satisfactory standard of instruction at the graduate level.

"Approve members of the teaching staff who conduct graduate courses and administer the prerequisites for graduate study and the requirements for a graduate degree.

"Supervise the classification of each graduate student."

In 1959 the University showed its continued interest in providing quality academic work at upper levels by appointing a Dean of The General College. This appointment, in essence, relieved the upper college Deans from detailed academic student concerns at the first and second year levels which had been one of their duties as members of the General College Committee. The change encouraged them to concentrate on the last two undergraduate years, as well as the individual college graduate programs. This arrangement, through the coordination of the respective college Deans with the Director of Graduate Studies, was further designed to consolidate the graduate efforts at the University.

Graduate study at The University of Akron takes on several dimensions and is offered in the following areas:

1. Biology
2. Business Administration
3. Chemistry
4. Economics
5. Education
6. Engineering
7. English
8. History
9. Physics
10. Political Science
11. Psychology

Although in each case a minimum list of credits, certain courses and a stipulated period of research may be required for an advanced degree, such minimum attainment constitutes a necessary, but by no means

sufficient condition for the awarding of a degree. A high level of achievement in the field must also be demonstrated.

Certain minor differences appear among the requirements for the Master's degrees in the various departments and colleges. However, the following are generally applicable:

1. A minimum of 30 credits of graduate work.
2. A quality point ratio of at least 3.0 in all graduate courses taken for the degree.
3. In most cases, a thesis or formal problem report is required.

Additional specifics are added to this list depending upon the field of specialization selected and the level of the degree. For example, the Ph.D. degree candidate must meet the following requirements:

1. Spend at least one calendar year in full time residence research.
2. Complete satisfactorily a minimum of 48 credits in graduate courses with at least half of this number through The University of Akron.
3. By examination, display the ability to use in his work at least two modern foreign languages.
4. Pass satisfactorily a comprehensive examination.
5. Prepare a dissertation based upon original research and equivalent to 36 credits of graduate work in addition to the 48 credits mentioned above.

The ultimate degree designations earned are the M.A., M.S. and Ph.D. in liberal arts fields; the M.S. in engineering; the M.A. or M.S. in Education for the education curricula and the M.B.A. in business administration. It is important to note that graduate degrees in the latter three categories are of a general nature. This helps to reduce the over-specialization that so often occurs in the development of such programs.

An applicant for admission to graduate study at the University must show that he has received the Bachelor's degree from a regionally accredited college or university. This he will do by making certain that the Registrar of such college or university sends directly to the Registrar of The University of Akron a complete transcript of his undergraduate record. If he has taken undergraduate and/or graduate work at more than one college or university, official and final transcripts of all such work must be provided.

The Registrar, upon examination of the official transcripts of record and under proper instructions, will admit an applicant to graduate study, provided that his record shows an overall quality point average of no less than 2.5 (2.0 is "C"; 3.0 is "B") and the necessary background courses for the graduate program which he wishes to pursue.

Applicants whose records fall short of such minimum requirements have been admitted on provisional graduate status by the Director of Graduate Studies upon recommendation of the Dean or Department Head concerned and in line with policy established by a Committee on Graduate Study.

In accordance with general practice at most urban universities, The University of Akron has offered the bulk of its graduate courses evenings for part-time students. The major exception is the research requirements in the Ph.D. chemistry program. Because of this procedure, the number of students actively engaged in graduate work at any one particular time will vary from semester to semester. As of Fall 1959, the graduate student distribution was as follows:

Liberal Arts (Biology, Chemistry, Economics, English, History, Physics, Political Science and Psychology)	195
Engineering	97
Education	105
Business Administration	76
Total:	473

The above figures represent somewhat less than 10% of the credit enrollment, day and evening, at the University. With the exception of the war years, this same approximate percentage has obtained since the early 1920's. However, as undergraduate enrollments increase, a continuation of this 10% figure will inevitably mean larger graduate enrollments. Also, the availability of recent expanded opportunities for graduates in fields such as engineering, chemistry and business administration will attract a greater number of qualified student candidates. Then too, the character of the professions and occupations is changing so rapidly that continuing education at the post baccalaureate level is almost mandatory today. The new knowledge, skills, attitudes and

flexibility that are needed to cope with the demands of the Space Age will most assuredly require a return to the classroom to maintain one's self at an effective level of self preservation.

Nationally, from 1948 through 1958, the number of earned graduate degrees awarded rose from 42,449 to 74,556, an increase of 75.6%. During this same period, the increase in undergraduate degrees approximated 34%. A study released in September of 1959 by the U. S. Office of Education indicates that the number of graduate degrees will nearly double by 1970. Graduate degrees granted at The University of Akron from 1948 through 1958 also reflect increased academic activity beyond the undergraduate level. Three hundred and fifty three graduate degrees were earned during this period, which represents over 45% of all graduate degrees awarded at the University from 1920 to date. If the totals of the June 1959 graduating class are added to the above, the statistics show that better than 51% of all University of Akron graduate degrees have been earned since 1948. This certainly is indicative of a growing local interest in continuing graduate education.

> "As more workers with graduate degrees become available, such degrees become increasingly important in competing for employment in the fields. It is believed that these trends will continue--that employers will require college education as a minimum qualification for more and different occupations, or at least will give preference to people with such education; also that an

> Increasing amount of graduate education will be required by employers or state boards of licensure in some occupations for which college training is already a prerequisite."

The above quote from an Occupational Handbook of the U. S. Bureau of Statistics confirms the trend for which The University of Akron must prepare itself. Though graduate study has been one of the functions of responsibility already accepted, it is evident that this field of education is destined to become of principal importance to the University's future academic growth. As a municipal institution dedicated to playing a major educational role in the community, The University of Akron must continue to expend its energies in new directions. This means that its objectives should be aimed at expanding institutional functions in keeping with the changing demands of the next several decades.

The "New" University and Its Community.

Historically, American education is characterized by a constant periodic "upward extension." Technological advancements brought about by continuous explosions of knowledge have required succeeding generations to set their educational sights higher and higher. Whereas a high school education was generally sufficient for normal subsistence in the 1880's, by the mid-twentieth century four years of college appeared to be a minimum requirement. As the "Fateful 60's" get underway, the technical, societal and economic advances facing the world today must, of necessity, look to post baccalaureate studies to meet the varied demands of this anxious age.

The study of basic knowledge and its tangential developments has crowded the high school and four years of college level curricula so overwhelmingly that institutions of higher learning are obligated to prepare citizens capable of meeting these new challenges. Of course, this requires expanded study opportunities at the graduate level, even though initially numbers so involved will be relatively small. This situation is particularly true of The University of Akron since its municipally supported status integrates its services so intimately into the life of the community. Even though there is little doubt that the University's founding fathers looked upon the institution as principally a baccalaureate institution and intended to support it as such, there is today every evidence that the University constituency is anxious to prepare for an advanced living pace requiring an educational investment in the future.

An urban institution such as The University of Akron, located in a highly industrialized and populated area, has certain unique educational functions that require it to spread its energies in several directions. This does not imply that the end result is undesirable. On the contrary, because of the many broad areas of service expected of them, urban institutions are destined to become the new frontiers in higher education. The role of the university is rapidly changing in our society, but nowhere is it more obvious than in institutions that have established themselves as integral parts of the community in which they find themselves. As these institutions grow, become involved locally and then expand beyond their

immediate geographical limits, they become more cosmopolitan and less provincial and find their societal obligations increasing. Then, principally because of the academic merits of its activities and the effects new and varied educational endeavors have upon the institution's resources, the question of priorities is raised. Fortunately, at The University of Akron, this has not yet become a problem--nor is it likely to do so in the foreseeable future.

A state report prepared by Dr. John Dale Russell in 1956 entitled Meeting Ohio's Needs in Higher Education predicted that graduate level programs would probably experience "unusually heavy increases" in the years to come. At least, in the considered judgment of Dr. Russell, this should be the case since Ohio falls far short of producing its share of graduate degrees. It is interesting to note that in this report mention was made of the advisability of the establishment of a Ph.D. program in Polymer Chemistry at The University of Akron. Of course, this has since been accomplished and, as indicated earlier, other Master's level programs, notably in engineering and business administration, have also been added. However, much more activity at this level needs to be encouraged before the requirements of the several professional fields will begin to be met in the Akron area as well as in the state and the nation.

On the national scene, this need has been emphasized by a number of recent and current educational studies. Perhaps the most significant one is the 1957 Second Report to the President of The President's Committee on Education Beyond the High School which statistically points out the need

to "enlarge and improve existing graduate programs." It further encourages university faculties to concern themselves more with their "high and unique mission of expanding human knowledge" and to obligate themselves to insure quality education as a means of providing society's hopes for the future. Among the Committee's recommendations, graduate education received the following support:

> "That universities expand and strengthen their graduate schools in all major fields of learning...make special effort to devise ways of creating interest in teaching on the part of their best students and to strengthen present programs at the master's and doctoral level, and devise new programs for the preparation of college teachers..."

It should be noted that in addition to the need to expand human knowledge, considerable effort needs to be exerted to prepare teachers for the nation's exploding population. Graduate work aimed in this direction is becoming as critical and necessary as programs oriented towards research in depth. Both types of educational services require programs of study beyond the baccalaureate level.

For the past several years, the University has been guided in its educational programs expansion by a requirement that each new development be academically sound and financially feasible. To determine these criteria, it has been necessary to study in depth each and every proposal presented for implementation. The end result has been a continuing forward program based upon deliberately cautious, but well conceived projects of academic

quality and financial strength. The establishment of a priority relationship among the numerous responsibilities of the institution have thereby become a part of the overall planning as the programs of the University have been expanded.

It is evident from the record that the institutional practices of accumulating pertinent data of all types on a continuing basis, of using the services of educational consultants in increasing frequency and of encouraging continuous studies in the several operating areas of the University, have contributed much toward providing the central administration with a blueprint of action aimed at helping to keep the educational programs in balance. Necessary data is constantly being supplied to the responsible officials should a decision on priorities need to be made in the future. As a result of the existing overall administrative structure of the University, the techniques and formulas presently being developed will assist the institution in identifying the time of decision well enough in advance to make the necessary adjustments. Suffice it to say that for the present and the next several years, there is no need to plan a curtailing of services at any educational level. As a matter of fact, it is highly desirable that such a decision be postponed as long as possible. In this way, the many cultural, academic and educational advantages of a multi-purpose institution of higher learning such as The University of Akron can properly accrue to the community it serves.

The University must continue to prepare to fulfill its local educational responsibilities, but also it must join its sister

institutions at the national level in the preparation of graduates academically qualified to maintain the status, prestige and welfare of the nation at a level second to none.

Perhaps one of the most effective developments in the higher educational process is the practice of encouraging universities and colleges literally to become cultural and intellectual "melting pots." The introduction of diverse student points of view on any campus can do much to provide the academic challenges that normally follow such a setting. The University of Akron is moving in this direction and is experiencing an increased attendance of students of varying backgrounds and experiences. As the University adds more dormitories, the complexion of its student body will become more cosmopolitan--a condition that will do much to give the institution national recognition, which it well deserves. Of course, as the make-up of the student body changes and unique graduate and continuing education course work is introduced, The University of Akron will need to be alert to priority demands on its services. As an institution of higher learning in an environment that is becoming more dependent upon the utilization of its vast educational resources, it must continue to be guided by a philosophy of education that will lend itself to academic flexibility.

Programming in Graduate Studies.

As mentioned in a previous section of this report, several fields of study are now covered by The University of Akron at the graduate level. On the basis of continued and increasing interest to achieve beyond the baccalaureate degree, as evidenced by enrollment trends, it appears that many existing demands are now being met. Every effort is being made to

provide graduate students with modern experiences aimed at preparing students to cope with inevitable changes and developments. Each of the programs offered emphasizes the need to extend the educational ladder upward to achieve further academic "depth" and "breadth."

Although the five year programs of study at the University aim at some specialization, content-wise the integrative concept prevails. Of course, the vast amount of knowledge that is being added to the existing accumulation makes this approach necessary. Specialization is only begun by the time the Master's degree is completed. It remains for the doctoral program to provide that definite and deliberate field of concentration generally expected beyond the bachelor's degree.

It appears, however, that a University pattern of programs of graduate study at the fifth year might very well be more clearly defined. The University has left no doubt as to its position and philosophy with respect to the undergraduate program. The institutional objectives designed to help achieve the general educational philosophy expounded are explicit and they provide a sound basis from which to proceed further. At the same time, similar guide lines are less obvious at the graduate level. This may suggest the advisability of crystallizing the varied graduate programs now in operation in such a way as to establish some commonality among the requirements stipulated and the graduate objectives sought. This should in no way be interpreted as a plan to standardize completely all curricula. Yet, it should be accepted as a basis from which the University could apply the appropriate and peculiar specialized requirements necessary to strengthen existing programs of graduate studies and thereby continue to anticipate and meet future demands.

The selection of new areas of graduate study for possible inclusion in the total programs of the University requires considerable preparation and development. The determination of need to expand in fields other than those already being offered is a rather delicate process. It can come about in a variety of ways: through formal community or organizational surveys, student or group petitions, administrative and faculty research, student surveys, industrial or educational requests and acquaintance with current scientific areas of expansion requiring programming in specialization.

The University of Akron, however, is guided in its expansion by an institutional philosophy that insists upon new programs being academically sound and financially feasible. Unless this test can be applied to new projects or programs of study proposed for implementation, and the results are positive, the resources of the University are utilized elsewhere.

In order to insure a University operation characterized by stability and modernity, such institutional assets as faculty, finances and facilities are examined in the process of arriving at a decision to add new programs. Certain offices of the University make every effort to maintain a constant check on the status quo in terms of desirable developments. Much has been accomplished to help maintain a base from which to build, but more can be achieved through a centralized office whose primary function would be to exercise the leadership necessary to achieve this goal. Of course, this means that the potentialities of the human, physical and financial resources of the University and the "educational pulse" of the community must be known at all times. This is important, since

sound evaluations of new educational programming require a total grasp of the academic as well as the clientele to be served.

A combination of several of the approaches mentioned above can provide effective bases for the consideration of new graduate study areas. An institution of higher learning intent upon carrying out its role as an educational leader must constantly be receptive to the graduate study opportunities at the fifth year level and beyond. For example, at The University of Akron two fields of study frequently being proposed for further exploration are mathematics and nuclear science. Yet, it is apparent that other academic areas should also command attention on the part of the University faculty and administration. In keeping with the dynamic pace at which our culture is progressing, The University of Akron is and must be on the alert constantly to meet the many academic challenges thrust upon it as an educational center of learning.

Of course, as is the case with most institutions, The University of Akron recognizes the fact that it does not have the resources to cover all fields of knowledge at the graduate level equally well. Because of this, some attention has been given to a cooperative plan proposed to utilize the joint resources of several area institutions of higher learning. In effect, this basic idea suggests that the strengths of many institutions be combined to provide an integrated program of studies for the student aiming in the direction of high specialization. This could very well be analogous to a situation where the needs of an academically talented student are met cooperatively by several "related" institutions rather than to place the economic and personnel burden

resulting from this type of plan in one institution. The pitfalls under this approach are readily apparent. However, there is every reason to believe that the advantages may be such as to warrant a more thorough examination.

Graduate study pioneering opportunities are most certainly present at The University of Akron. The boundaries are broad, but sound administrative judgment and graduate academic leadership can do much to direct the institution into positive channels and new dimensions.

Faculty, Facilities and Finances at the Graduate Level.

In an institution whose objectives are designed to provide a variety of educational services, faculty competencies in the areas of teaching and research are required. It is not a question of either or, but a balance between the two that is desirable.

Graduate study has often been referred to as the "apex of the structure of higher education." The reasons for this are that advancement in knowledge receives its greatest impetus from graduate research. Also, the teachers who carry on this educational process are academically prepared through graduate curricula.

The question is often raised as to the extent of emphasis that should be placed on research as compared to the ability to transmit knowledge. The answer to this is obvious. In order to carry out the true functions of a university, both types of faculty members must be sought and ideally, those persons who are proficient at both tasks should

be added to a graduate staff. Of course, certain disciplines require more extensive and continuous research to maintain a current working knowledge of the direction in which they are moving. Others require less specialization and higher general competence. In the first case, research ability must be a corequisite with teaching skills; in the latter situation, techniques designed to stimulate learning become most essential. In either case, the central purpose should be intellectual stimulation aimed at the pursuit of truth and an appreciation of the cultural values that underlie our very existence.

Generally speaking, instructors responsible for graduate teaching should hold the highest terminal degrees or equivalents in their fields. Yet, their scholarship should never become static. They need to have a sincere interest in advancing the frontiers of knowledge and a personal desire to exercise creative approaches to their work--be it in research or/and in teaching.

Graduate teaching should be part of a normal schedule which includes undergraduate teaching as well as graduate instruction and opportunities to conduct some type of scholarly activity. Such a distribution of responsibilities can provide a richer sequence of advanced courses since the faculty members so involved benefit from the wider professional contacts they experience. At the same time, both the graduate and undergraduate students gain the advantage of a greater variety of points of view. Even though the academic prestige of an institution and its faculty is often measured by the caliber of its graduate studies, one must not lose sight of another principal educational service being provided by

universities to a less advanced group--the undergraduate student body. Unless many of the advantages of a strong graduate program accrue to the undergraduate, the motivation to pursue post baccalaureate studies may not be present.

Staff overlapping helps to blend the quality of instruction in the two levels. Graduate and undergraduate students are likely to be attracted from the same sources. When this occurs, the institution's offerings at these two levels are bound to affect each other. Rather than detract from one another, a good graduate program can enrich the undergraduate program.

With the exception of the need for special laboratories, facility requirements for graduate studies are not too different from those of undergraduate programs. Some small seminar rooms with tables and chairs are desirable, but this type of accommodation is also useful for undergraduate classes. However, library services must be extended since graduate study is dependent upon the availability of adequate library resources on a campus. Generally speaking, graduate curricula require library holdings out of proportion to the additional number of courses and students concerned. It has been observed by the experts in the field that "lack of superior library resources or failure to use them well condemns the program to mediocrity at the start."

Just as required added library resources increase the cost of offering graduate studies, the instructional cost per graduate student similarly rises. Graduate classes are, for the most part, smaller and at the research level in the degree programs, the faculty direction and guidance provided further adds to the cost.

In some academic areas, professional groups take the position that faculty loads should be reduced for those staff members teaching graduate courses. This point of view, however, is debatable. Another school of thought, equally persuasive, maintains that load distinctions need not exist between graduate and undergraduate instruction. As a matter of fact, teaching beginning courses to freshmen in large groups often provides a greater teaching challenge than working with advanced graduate students who are already motivated to achieve. The stimulation of senior faculty members should be experienced by as many students as possible. However, regardless of how a faculty member's teaching assignment time is allocated, the enrollment limitation in graduate studies places these courses in the expensive category.

Instructional cost studies recently conducted at The University of Akron revealed a sizeable difference between undergraduate and graduate faculty-student credit hour costs. Although the amount varied among departments, a fair general analysis of the data collected shows that the graduate cost per faculty-student credit hour is three times that for undergraduate courses. If the trend towards larger graduate enrollments continues, a greater part of the total institutional budget will need to be directed to the graduate area. As this becomes more of a major consideration at the University, detailed studies will need to be accomplished covering such related items as faculty loads, course credits, size of classes, graduate course fees, library holdings and research facilities. There is no immediate problem with regard to these fiscal requirements. However, in anticipation of pressures for graduate studies

over the next decade, the ground work should now be laid to establish a framework from which to plan. Unless thorough and deliberate graduate oriented studies are launched without delay, an academically sound and financially feasible balance among the numerous educational services provided by the University may soon become unstable. It goes without saying that all this should follow as the graduate organization of the institution is restructured with the objective of devoting more faculty and administrative attention to this vital and growing level of education.

Administration of Graduate Studies.

The various graduate curricula at The University of Akron are decentralized among the Upper Colleges. The individual college faculties have the academic responsibility for the development of the programs offered and, as with the undergraduate curricula, the University Council serves as the legislative approval body for new courses and specific content changes. However, a University Committee on Graduate Studies, whose chairman was the Director of Graduate Studies until recently, served in a policy-making role over all the varying graduate programs and was charged with the responsibility of overseeing the development of the graduate work. This has been so in theory, but practical experience proved this administrative structure to be somewhat vague and cumbersome for carrying out its functions and for planning the continued growth of the program.

During the 1959-60 academic year, a team of educators visited the University campus as part of the North Central Association's program of accreditation examinations. The team was favorably impressed with the

quality of the graduate programs of study and made a special point of commending the Ph.D. curriculum in Polymer Chemistry. References were also made to the institution's administrative practices and special favorable mention was made of the growing trend at the University to move away from Committee administration. The final report of this team stated:

> "Commendably, the University centers responsibility for specialized programs in administrative officers rather than in Committees."

The report went on to note that "each of the major services and academic areas is headed by an administrator." In anticipation of increased activities in graduate studies, it is therefore reasonable to expect that since this academic area has "come of age," so to speak, and that it should continue to expand, more responsibility for its administration needs to be assigned to a single official.

In an academic environment that offers master's degrees in eleven fields and a Ph.D. in Polymer Chemistry, some positive move towards centralization was not only advisable, but mandatory. Even though the degrees are granted by the individual colleges, the stamp of approval of the University confirms their academic respectability. There is no question but that the content of each program is unique and that it requires specialized treatment. However, it should also be noted that the more numerous and varied these curricula are, the more necessary it becomes to establish policy and direction aimed at insuring some overall academic balance. Also, the fact that so much of the graduate course work is offered in the evenings, on a part time basis, and generally

speaking to students whose primary responsibilities are vocationally oriented, necessitates more careful administrative control.

In large institutions where considerable resources are turned over to graduate studies, a special graduate faculty is often designated to carry on the instruction at this level. It is obvious that a faculty with "sole" responsibility for graduate teaching cannot be maintained by The University of Akron at this time. Therefore, qualified selected faculty members from among the pertinent disciplines must be "borrowed" to teach at this level. These persons should still remain members of the degree granting colleges, but they should also serve as members of a graduate faculty. However, assignments of teaching staff to graduate classes should be made on the basis of subject matter competency, experience, teaching effectiveness and interest in research activities.

During a period of growth, as graduate programs are being established, a Committee type of administration carried on as "additional duty" may be acceptable. However, as the numbers of students increase and the graduate offerings begin to multiply, the leadership, guidance and control of this vital educational level becomes more crucial. Assuming that the present 10% figure of graduate students as compared to undergraduates continues to obtain, the "doubling concept" will also apply to graduates by 1970. Therefore, action has been taken by the Board of Directors and the President to restructure the administration of graduate work at the University in anticipation of meeting high enrollments.

To achieve maximum academic efficiency at the post baccalaureate level, it appeared that the most logical administrative solution would

be one that called for a principal administrative officer responsible for all of the graduate programs. The University recognized that so much coordination of faculty, curricula, facilities and record keeping is required that committee action under the leadership of a part time graduate official could no longer adequately fulfill this function. To clarify and crystallize the existing patterns of graduate programming and to prepare for future growth and development, a full time administrator at a level comparable to the existing college Deans, was appointed effective July 1, 1960. His duties were spelled out by the Board of Directors and the President as follows:

> "...Call meetings of the Division faculty from time to time and preside at such meetings; appoint the members of such standing and special committees of the faculty as may be established or authorized; determine, in cooperation with the faculty of the Division, the qualifications of the teaching staff members who conduct graduate courses; transmit to the President of the University the supplies and equipment budgetary recommendations of the Division as worked out in conference with the Deans and department heads of those units which offer graduate work; recommend the appointment, salary, tenure and dismissal of any faculty members who hold full-time appointment in the Graduate Division; promote the welfare of the faculty of the Division; supervise, in cooperation with the appropriate academic officers, the progress and academic welfare of the students and classify and assign them to graduate courses; see that the rules and regulations established for the conduct and discipline of graduate students are enforced; encourage the several colleges to develop programs of graduate study provided such programs are educationally sound and financially feasible; be jointly responsible with the Deans of the degree-granting colleges for maintaining a satisfactory standard of instruction at the graduate level; administer the prerequisites for graduate study and the requirements for a graduate degree as developed by the College faculty and approved by the University Council; recommend the award of graduate degrees, after approval of the Division's faculty, to the Dean and faculty of the appropriate degree-granting colleges; submit to the President at

> least ten days in advance of each meeting of the University Board such recommendations concerning the Division as he may desire to be acted upon by the Board; take reasonable precaution for the safekeeping of all instructional equipment and supplies of the Division; submit annually to the President a report concerning the activities, problems and needs of the Division; and perform such other duties as are assigned to him by the President."

Under the academic control of a graduate faculty and a principal administrator, it appears that the necessary leadership has now been provided to insure continued quality performance on the part of both faculty and students at the graduate level. Also, the way has been cleared to encourage the organized exploration and study of other areas of graduate work in which the University needs to commit itself, both from a short and long range point of view.

Summary and Conclusion.

There is general unanimity among the educational leaders of our time that a true university must serve the public. The relative merits of this point of view cannot be argued. However, varying opinions become readily apparent as one attempts to apply the significance of this position to any local situation. Specifically, the nature of the "public" to be served and the type of service to be provided determine the extent to which an institution of higher learning carries out its delegated functions. Unfortunately, no general plan has been evolved that can be instituted at will to produce the desired results. Blue prints of action must be "custom made" to meet the unique characteristics present in a particular setting.

The location of The University of Akron in a modern industrialized community in which the rubber and polymer industry is prominent, partially

tax supported by the municipality and dedicated to its role as the area's educational apex, automatically establishes particular guide posts for carrying out its responsibilities. However, professional judgment based upon accepted practice and demonstrated need, should be carefully exercised in preparing the way for final action. Consequently, as the University enters its tenth decade of service, increased attention should be given to next steps in the area of post baccalaureate studies in anticipation of new and expanded activity at this level.

As noted previously, The University of Akron's institutional objectives are well organized for general academic programming. On the other hand, an overall University philosophy for graduate work must be considered. From this, the individual colleges could pattern their particular aims and purposes with a more positive feeling of accomplishment.

The 1960 census has revealed that the population of Summit County, the principal area served by The University of Akron, has undergone a pronounced numbers growth. All indications are that by 1970, this population explosion will be even greater. The introduction of new industries to the local economy, as well as the natural growth of the existing concerns, should create continuing educational needs. Considering the important role an institution of higher learning plays in an expanding industrial area, the University needs to "gear up" in anticipation of new and increased educational demands in keeping with the area's growth. Also, studies beyond the baccalaureate level, namely as regular curricula leading to graduate degrees and specialized programs of study continuing beyond the bachelor's degree, will command more and more of the institution's resources.

For example, it appears that a thorough investigation of certain fields of graduate study not yet offered by the University needs to be made. One such area might be mathematics, which has attracted considerable interest on the part of graduates currently employed in business and industry. The availability of an AGN-201 nuclear reactor on campus has stimulated enthusiasm for a fuller utilization of this instrument as part of another possible graduate program in nuclear science. Certainly both possibilities need further study along with several other areas not yet identified.

In the special field of educational planning and programming, in addition to regular degree oriented curricula, post baccalaureate study through institutes, conferences, workshops, lecture series and short courses must continue to be an integral part of the University's program of advanced work. An illustration of this type of offering can be identified in educational opportunities developed through institutes for post legal degree persons requiring an "updating" of current practices in law. Review courses scheduled for graduate accountants preparing for the C.P.A. designation also fall in this category. Likewise, lecture series on modern methods of rubber compounding or tire construction assist chemists and engineers in their professional growth at the graduate level. In all instances, the University is accepting the responsibility for providing educational services beyond the four year baccalaureate programs and aimed at advancing the academic and/or occupational proficiency of the students concerned.

Experts in the field of community-institutional relationships stress the current urgency on the part of all institutions of higher learning to discover the image of a university in its own locale. It is one of several factors often considered for future planning. Information relative to the changing nature of a community's residents and point of view should be available to an institution providing educational services to a particular geographical area. Often times periodic surveys of this type reveal that a community's concept of the role that the institution is performing is distorted. Therefore, knowledge of this societal attitude is useful in helping a center for higher education create a more realistic impression of its functions to its clientele.

Too many Americans have viewed the responsibility of a university to society in a single light--namely, the imparting of knowledge. In the words of an eastern educator, a university is an organization of "resources consisting of people, physical facilities and finances, having as its goal the performance of three functions: INSTRUCTION, RESEARCH and PUBLIC SERVICE." The first can be accomplished at the undergraduate or graduate level, but the latter two are commonly associated with post baccalaureate work, be it formal or informal. Having established itself in the field of teaching, The University of Akron must now turn to an emphasis in research activities and to a continued and expanded program of community service requiring the utilization of the many resources of the institution. A static institution unaware of the revitalized roles being assigned to universities interested in promoting the welfare of a booming population and economy, cannot long endure. Therefore, it behooves each and every

person associated with The University of Akron to raise his sights in the direction of progress--an evolving state of being identified by an expansion of educational services at the upper end of the academic ladder.

Recommendations on Graduate Study.

1. That an advancing philosophy of formal graduate education be developed in keeping with the overall general concept of educational objectives and services already determined for the University.

2. That the University stress its interest and desires to promote and expand its existing programs of continuing education in line with its accepted function of providing services at advanced levels.

3. That the University consider the utilization of qualified staff to conduct a community survey to determine the community's image of the University as one method in assisting the administration and faculty in the development of appropriate educational programs.

4. That new areas of graduate work be investigated for possible development and inclusion in the graduate program in keeping with current and future educational needs. It is evident that areas such as mathematics and nuclear science should be among the first to receive attention in this process.

5. That the University investigate the advisability and practicality of establishing joint graduate degree programs with area institutions of higher education.

6. That the university intensify its efforts to obtain adequate scholarship and fellowship funds in order that a larger number of qualified graduate students from a wide geographical area may be assisted in pursuing advanced study in the several academic fields available at The University of Akron.

7. That the newly appointed Dean of the Graduate Division, together with his graduate faculty, review administrative and academic policy with reference to the many facets of operation involved in graduate programming and make such changes as are deemed necessary in light of the emphasis on graduate education being proposed.